

Table 5
Tule Marsh Habitat Vegetation Monitoring Results

Monitored Element	Final Performance Standard	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	10 th Year
Extent	32 acres	3 acres	4 acres	7 acres	32 acres	34 acres	32 acres	33 acres	33.2 acres	>33.2 acres	>33.2 acres
Absolute Cover	60%	0.02%	27%	100%	22.5%	40%	60%	65%	75%	±75%	±75%
Relative Tall Emergent Cover	50%	N/A	N/A	N/A	80%	85%	50%	73%	75%	±75%	±75%
Relative Native Cover	80%	100%	100%	81%	90%	95%	80%	100%	99.7%	±99%	±80%
Plant Height	4 feet	N/A	N/A	N/A	2.5 ft.	4.0 ft.	4.0 ft.	7.8 ft.	8.7 ft.	±8.7 ft.	±8.7 ft.
Relative Hydrophyte Cover	90%	100%	100%	100%	100%	99%	90%	100%	100%	100%	100%
Open Water	<20%	N/A	N/A	N/A	>70%	<45%	<20%	<20%	<20%	<20%	<20%



Photo 5: View from the northwest corner of the property looking south. June 2018.



Photo 6: View looking east from the northwest corner of the property. June 2018.

Based on aerial photographs, the extent of the tule marsh habitat has not changed since last year's results and remains above the performance standard of 32 acres. Since planting in 2012, the tules have exhibited steady, moderate growth. However, over the past two years the rate of growth appears to have slowed. This is likely due to the relatively high tule cover on those lands that were readily available and suitable.

Absolute cover within the tule marsh habitat remains high and above the performance standard of 60%. Based on a visual comparison of aerial photographs from last year and this year, absolute cover within the tule marsh habitat has remained approximately the same (between 70% and 80%). As discussed in previous years monitoring reports, the areas previously planted with tules have coalesced and now have almost continuous cover. These planted areas appear to be slowly expanding into the areas not previously planted, thus resulting in slow but consistent increases in absolute cover.

Relative tall emergent cover is high and above the performance standard of 50%. Although cover from primrose and other species is present throughout the sample plots, tules and a small number of cattails dominate the marsh. Plant height throughout the marsh has increased annually since planting and is significantly above the performance standard of 4 feet. Relative hydrophyte cover is very high at 100% and open water is less than 20%.

Invasive weed growth in this zone is seasonal and controlled by tides and wind. Generally, water hyacinth (*Eichorina crassipes*), six petal primrose (*Ludwigia hexapetala*) and other non-native aquatics reach peak growth in August to September and cover up to 10 to 15% of the total water area. This year, six petal primrose has been growing within the southern part of the site and cover increased from approximately 15% of the marsh at the time of monitoring in early summer to approximately 25% in early fall. Water hyacinth has, however, been close to absent from the site with less than 1% cover.

Shin Kee generally does not experience the explosive growth in aquatic weeds that other areas of the delta experience. This is generally because the marsh is oriented in a northwest-southeast direction, the same direction as the prevailing winds, which keeps the floating aquatics penned into the southeast edges of the site. With the advent of winter, these then die off and are flushed out through the culverts in the southeast corner or are stranded above the high tide level by the winter storms, where they then become part of the organic detritus in this zone. We expect that the six petal primrose growing within the southern part of the site will flush out through the culverts or get stranded above the high tide line this winter. We anticipate a substantial decline in six petal primrose cover next year and do not anticipate that the species will be as abundant in the coming years.

Although the tule marsh continues to meet its performance standards, we noticed a decline in tule cover in the southwestern corner of the marsh three years ago. We have been carefully monitoring this area and have noticed a slow return of tules to the area. To further document and monitor the return of tules to the area we placed six sample plots in this area and will monitor these plots for five years or until the tule population has returned and stabilized.

C. Photo Documentation

Photographs were taken from established photo points to document site conditions and are supplied throughout the text.

III. MANAGEMENT RECCOMENDATIONS

Monitoring and management over the past several years has focused primarily on the performance and extent of the tule marsh habitat; however, monitoring throughout the site has demonstrated the ability of the native plants to spread and out compete non-native competitors. Given the relatively stable performance of the habitats at Shin Kee over the past several years, this report recommends that maintenance continue to follow the current management plan including:

1. Mow levee every other year to reduce non-native vegetation. The levee was mowed during the summer of 2018 and should be mowed again in 2020.
2. Survey vegetation annually for exotic invasive species.
3. Survey six petal primrose within the southern part of the marsh to see if it is leaving the site through the southern culverts.
4. As needed, spot spray patches and hand pull exotic invasive vegetation to control population and prevent spread.

The hydrologic regime, as noted above, has produced optimal conditions for GGS and tule marsh over the past several years and will be left as is. The gates are now set at specific conditions that create average water surface elevations and tidal ranges similar to those found at the Coldani Marsh (which also has tide gates) and can likely be left at their current positions in perpetuity.

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APPENDIX A
Vegetation Monitoring Results

		Hydrophyte			Plot: Unveg:	Shin Kee Intertidal Marsh							
Common Name	ROIND		Native			3	7	11	15	20	26	33	Ave.
				Per									
yerba mansa	OBL	1	1	1	<i>Anemopsis californica</i>								0.00
slender aster	FACW	1	1	1	<i>Aster subulatus</i> var. <i>ligulatus</i>					0.1			0.01
Santa Barbara sedge	FACW	1	1	1	<i>Carex barbarae</i>								0.00
clustered field sedge	FACW-	1	1	1	<i>Carex praegracilis</i>					2.5			0.36
brown dogwood	FACW	1	1	1	<i>Cornus glabrata</i>								0.00
tall flat-sedge	FACW	1	1	1	<i>Cyperus eragrostis</i>								0.00
Sedge sp.	FACW	1	1	1	<i>Cyperus</i> sp.		0.1						0.01
salt grass	FACW	1	1	1	<i>Distichlis spicata</i>								0.00
spikeweed	OBL	1	1	1	<i>Eleocharis</i> sp.				87.5				12.50
common waterweed	OBL	1	1	1	<i>Elodea canadensis</i>								0.00
hairy willowherb	FACW	1	1	1	<i>Epilobium ciliatum</i>								0.00
seaside heliotrope	OBL	1	1	1	<i>Heliotropium curassavicum</i>								0.00
water penny	OBL	1	1	1	<i>Hydrocotyl</i> sp.								0.00
Baltic rush	OBL	1	1	1	<i>Juncus balticus</i>								0.00
soft rush	OBL	1	1	1	<i>Juncus effusus</i>		15	2.5		37.5	62.5	37.5	22.14
iris-leaved rush	OBL	1	1	1	<i>Juncus xiphioides</i>								0.00
creeping wildrye	FAC+	1	1	1	<i>Leymus triticoides</i>					15	87.5		14.64
water primrose	OBL	1	1	1	<i>Ludwigia peploides</i>		87.5	37.5	15	37.5			25.36
swamp smartweed	OBL	1	1	1	<i>Polygonum hydropiperoides</i>								0.00
Fremont cottonwood	FACW	1	1	1	<i>Populus fremontii</i>								0.00
California rose	FAC+	1	1	1	<i>Rosa californica</i>					2.5			0.36
gray willow	OBL	1	1	1	<i>Salix exigua</i>					1			0.14
Gooding willow	OBL	1	1	1	<i>Salix goodingii</i>								0.00
red willow	FACW+	1	1	1	<i>Salix laevigata</i>							15	2.14
arroyo willow	FACW	1	1	1	<i>Salix lasiolepis</i>								0.00
tule	OBL	1	1	1	<i>Scirpus acutus</i>		15						2.14
three square	OBL	1	1	1	<i>Scirpus americanus</i>	15			62.5		15	2.5	13.57
salt marsh bullrush	OBL	1	1	1	<i>Scirpus robustus</i>	87.5							12.50
southern cattail	OBL	1	1	1	<i>Typha domingensis</i>				15		37.5	37.5	12.86
broad-leaved cattail	OBL	1	1	1	<i>Typha latifolia</i>	2.5	15	87.5		87.5			27.50
stinging nettle	FACW	1	1	1	<i>Urtica dioica</i> ssp <i>holosericea</i>								0.00
fat hen	FACW	1	1	0	<i>Atriplex triangularis</i>								0.00
horseweed	FAC	1	1	0	<i>Conyza canadensis</i>								0.00
toad rush	FACW+	1	1	0	<i>Juncus bufonius</i>								0.00
broad-leaved pepperweed	FACW	1	0	1	<i>Lepidium latifolium</i>								0.00
bird's-foot trefoil	FAC	1	0	1	<i>Lotus corniculatus</i>								0.00
dallisgrass	FAC	1	0	1	<i>Paspalum dilatatum</i>		0.1		15	2.5			2.51
Vasey grass	OBL	1	0	1	<i>Paspalum urvillei</i>							2.5	0.36
Kentucky bluegrass	FAC	1	0	1	<i>Poa pratensis</i>								0.00
dooryard knotweed	FAC	1	0	1	<i>Polygonum arenastrum</i>								0.00
water beard grass	FACW	1	0	1	<i>Polypogon viridis</i>					0.1			0.01
green dock	FACW	1	0	1	<i>Rumex conglomeratus</i>								0.00
curly dock	FACW-	1	0	1	<i>Rumex crispus</i>								0.00
Fiddleleaf dock	FAC	1	0	1	<i>Rumex pulcher</i>					0.1		0.1	0.03
Himalaya blackberry	FACW	1	0	1	<i>Rubus discolor</i>								0.00
Pacific bent grass	FACW*	1	0	0	<i>Agrostis avenacea</i>						2.5	37.5	5.71
Slender centaury	FACW	1	0	0	<i>Centaureium tenuiflorum</i>					1	0.1		0.16
lamb's quarters	FAC	1	0	0	<i>Chenopodium album</i>								0.00
poison hemlock	FACW	1	0	0	<i>Conium maculatum</i>								0.00
water hyacinth	OBL	1	0	0	<i>Eichhornia crassipes</i>								0.00
weedy cudweed	FACW-	1	0	0	<i>Gnaphalium luteo-album</i>					0.1			0.01
Seaside barley	FAC	1	0	0	<i>Hordeum marinum</i>								0.00
prickly lettuce	FAC	1	0	0	<i>Lactuca serriola</i>								0.00
bearded sprangletop	OBL	1	0	0	<i>Leptochloa fiscicularis</i>								0.00
Italian ryegrass	FAC	1	0	0	<i>Lolium multiflorum</i>								0.00
hyssop loosestrife	FACW	1	0	0	<i>Lythrum hyssopifolia</i>								0.00
India sweet-clover	FAC	1	0	0	<i>Melilotus indica</i>		2.5			2.5			0.71
bristly ox-tongue	FAC	1	0	0	<i>Picris echioides</i>					0.1	0.1	2	0.31
annual blue-grass	FACW-	1	0	0	<i>Poa annua</i>								0.00
rabbitfoot grass	FACW+	1	0	0	<i>Polypogon monspeliensis</i>				0.1	15		2.5	2.51
coyote bush	UPL	0	1	1	<i>Baccharis pilularis</i>								0.00
big leaf mistletoe	UPL	0	1	1	<i>Phoradenron macrophyllum</i>								0.00
parched willowherb	UPL	0	1	0	<i>Epilobium brachycarpum</i>					0.1			0.01
Bindweed	UPL	0	0	1	<i>Convolvulus arenis</i>								0.00
Bermuda grass	FACU	0	0	1	<i>Cynodon dactylon</i>	2.5							0.36
wild oat	UPL	0	0	0	<i>Avena fatua</i>								0.00
ripgut grass	UPL	0	0	0	<i>Bromus diandrus</i>								0.00
soft chess	FACU-	0	0	0	<i>Bromus hordeaceus</i>								0.00
Spanish Brome	UPL	0	0	0	<i>Bromus madritensis</i>								0.00
Italian thistle	UPL	0	0	0	<i>Carduus pycnocephalus</i>								0.00
Big heron bill	FACU	0	0	0	<i>Erodium botrys</i>								
Rattail sixweeks grass	UPL	0	0	0	<i>Festuca myuros</i>								0.00
Yellow sneezeweed	FACU	0	0	0	<i>Helenium amarum</i>							0.1	0.01
summer mustard	UPL	0	0	0	<i>Hirschfeldia incana</i>								0.00
Foxtail barley	FACU	0	0	0	<i>Hordeum murinum</i>								0.00
mallow	UPL	0	0	0	<i>Malva</i> sp								0.00
pineapple weed	FACU	0	0	0	<i>Matricaria matricarioides</i>								0.00
Bur clover	FACU	0	0	0	<i>Medicago polymorpha</i>								0.00
white sweet-clover	FACU+	0	0	0	<i>Melilotus alba</i>								0.00
Wild radish	UPL	0	0	0	<i>Raphanus sativus</i>								0.00
common groundsel	NI	0	0	0	<i>Senecio vulgaris</i>								0.00
common sow-thistle	NI	0	0	0	<i>Sonchus oleraceus</i>								0.00
mid-points					(Sp. Rich.) Number of species:	4	7	3	6	17	7	10	7.71
					Number of native species:	3	5	3	4	8	4	4	4.43
					Total veg cover	107.5	135.2	127.5	195.1	205.1	205.2	137.2	158.97
					relative veg cover (=100-unveg):	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.00
					Σ cover of all hydrophytic spp:	105.0	135.2	127.5	195.1	205.0	205.2	137.1	158.59
					Σ cover of all native spp:	105.00	132.6	127.5	180.0	183.7	202.5	92.5	146.26
					Σ cover of all perennial spp:	107.5	132.7	127.5	195.0	186.2	202.5	95.0	149.49
					relative cover of hydrophytes:	98%	100%	100%	100%	100%	100%	100%	100%
					relative cover of natives:	98%	98%	100%	92%	90%	99%	67%	92%
					relative cover of perennials:	100%	98%	100%	100%	91%	99%	69%	94%

mid-points

5=75-100%
4=50-75%
3=25-50%
2=5-25%
1=many-5%
d=few
r=one

5==87.5
4==62.5
3==37.5
2==15
1==2.5
d==0.1
r==0.01

		Hydrophyte			Plot: Unveg:	Shin Kee Riparian Wetland							
			Native	Per		4	8	10	17	22	27	34	Ave.
Common Name	ROIND						15					0.1	2.16
yerba mansa	OBL	1	1	1	<i>Anemopsis californica</i>								0.00
slender aster	FACW	1	1	1	<i>Aster subulatus</i> var. <i>ligulatus</i>			0.1	0.1				0.03
Santa Barbara sedge	FACW	1	1	1	<i>Carex barbarae</i>	37.5	15		37.5	15	87.5	15	29.64
clustered field sedge	FACW-	1	1	1	<i>Carex praegracilis</i>		37.5	87.5	37.5	37.5			28.57
brown dogwood	FACW	1	1	1	<i>Cornus glabrata</i>								0.00
tall flat-sedge	FACW	1	1	1	<i>Cyperus eragrostis</i>								0.00
Sedge sp.	FACW	1	1	1	<i>Cyperus</i> sp.								0.00
salt grass	FACW	1	1	1	<i>Distichlis spicata</i>								0.00
spikeweed	OBL	1	1	1	<i>Eleocharis</i> sp.								0.00
common waterweed	OBL	1	1	1	<i>Elodea canadensis</i>								0.00
hairy willowherb	FACW	1	1	1	<i>Epilobium ciliatum</i>								0.00
seaside heliotrope	OBL	1	1	1	<i>Heliotropium curassavicum</i>								0.00
water penny	OBL	1	1	1	<i>Hydrocotyl</i> sp.								0.00
Baltic rush	OBL	1	1	1	<i>Juncus balticus</i>								0.00
soft rush	OBL	1	1	1	<i>Juncus effusus</i>		15			2.5	15	87.5	17.14
iris-leaved rush	OBL	1	1	1	<i>Juncus xiphioides</i>								0.00
creeping wildrye	FAC+	1	1	1	<i>Leymus triticoides</i>						2.5		0.36
water primrose	OBL	1	1	1	<i>Ludwigia peploides</i>								0.00
swamp smartweed	OBL	1	1	1	<i>Polygonum hydropiperoides</i>								0.00
Fremont cottonwood	FACW	1	1	1	<i>Populus fremontii</i>	37.5	62.5		62.5	15	15		27.50
California rose	FAC+	1	1	1	<i>Rosa californica</i>								0.00
gray willow	OBL	1	1	1	<i>Salix exigua</i>								0.00
Gooding willow	OBL	1	1	1	<i>Salix goodingii</i>								0.00
red willow	FACW+	1	1	1	<i>Salix laevigata</i>								0.00
arroyo willow	FACW	1	1	1	<i>Salix lasiolepis</i>								0.00
tule	OBL	1	1	1	<i>Scirpus acutus</i>								0.00
three square	OBL	1	1	1	<i>Scirpus americanus</i>								0.00
salt marsh bullrush	OBL	1	1	1	<i>Scirpus robustus</i>								0.00
southern cattail	OBL	1	1	1	<i>Typha domingensis</i>								0.00
broad-leaved cattail	OBL	1	1	1	<i>Typha latifolia</i>			2.5					0.36
stinging nettle	FACW	1	1	1	<i>Urtica dioica</i> ssp <i>holosericea</i>								0.00
fat hen	FACW	1	1	0	<i>Atriplex triangularis</i>								0.00
horseweed	FAC	1	1	0	<i>Conyza canadensis</i>								0.00
toad rush	FACW+	1	1	0	<i>Juncus bufonius</i>								0.00
broad-leaved pepperweed	FACW	1	0	1	<i>Lepidium latifolium</i>								0.00
bird's-foot trefoil	FAC	1	0	1	<i>Lotus corniculatus</i>	37.5							5.36
dallisgrass	FAC	1	0	1	<i>Paspalum dilatatum</i>			2.5					0.36
Vasey grass	OBL	1	0	1	<i>Paspalum urvillei</i>								0.00
Kentucky bluegrass	FAC	1	0	1	<i>Poa pratensis</i>								0.00
dooryard knotweed	FAC	1	0	1	<i>Polygonum arenastrum</i>		0.1						0.01
water beard grass	FACW	1	0	1	<i>Polypogon viridis</i>								0.00
green dock	FACW	1	0	1	<i>Rumex conglomeratus</i>								0.00
curly dock	FACW-	1	0	1	<i>Rumex crispus</i>						0.1		0.01
Fiddleleaf dock	FAC	1	0	1	<i>Rumex pulcher</i>								0.00
Himalaya blackberry	FACW	1	0	1	<i>Rubus discolor</i>								0.00
Pacific bent grass	FACW*	1	0	0	<i>Agrostis avenacea</i>								0.00
Slender centaury	FACW	1	0	0	<i>Centaureum tenuiflorum</i>								0.00
lamb's quarters	FAC	1	0	0	<i>Chenopodium album</i>								0.00
poison hemlock	FACW	1	0	0	<i>Conium maculatum</i>								0.00
water hyacinth	OBL	1	0	0	<i>Eichhornia crassipes</i>								0.00
weedy cudweed	FACW-	1	0	0	<i>Gnaphalium luteo-album</i>								0.00
Seaside barley	FAC	1	0	0	<i>Hordeum marinum</i>								0.00
prickly lettuce	FAC	1	0	0	<i>Lactuca serriola</i>								0.00
bearded sprangletop	OBL	1	0	0	<i>Leptochloa fiscicularis</i>								0.00
Italian ryegrass	FAC	1	0	0	<i>Lolium multiflorum</i>								0.00
hyssop loosestrife	FACW	1	0	0	<i>Lythrum hyssopifolia</i>								0.00
India sweet-clover	FAC	1	0	0	<i>Melilotus indica</i>		2.5		0.1				0.37
bristly ox-tongue	FAC	1	0	0	<i>Picris echioides</i>					0.1			0.01
annual blue-grass	FACW-	1	0	0	<i>Poa annua</i>								0.00
rabbitfoot grass	FACW+	1	0	0	<i>Polypogon monspeliensis</i>	2.5	37.5					15	7.86
coyote bush	UPL	0	1	1	<i>Baccharis pilularis</i>								0.00
big leaf mistletoe	UPL	0	1	1	<i>Phoradenron macrophyllum</i>								0.00
parched willowherb	UPL	0	1	0	<i>Epilobium brachycarpum</i>		2.5			0.1			0.37
Bindweed	UPL	0	0	1	<i>Convolvulus arvensis</i>				2.5				0.36
Bermuda grass	FACU	0	0	1	<i>Cynoda dactylis</i>								0.00
wild oat	UPL	0	0	0	<i>Avena fatua</i>	0.1			0.1	15			2.17
ripgut grass	UPL	0	0	0	<i>Bromus diandrus</i>		2.5		2.5				0.71
soft chess	FACU-	0	0	0	<i>Bromus hordeaceus</i>	15	15		37.5	37.5		15	17.14
Spanish Brome	UPL	0	0	0	<i>Bromus madritensis</i>		2.5						0.36
Italian thistle	UPL	0	0	0	<i>Carduus pycnocephalus</i>					0.1	2.5		0.37
Big heron bill	FACU	0	0	0	<i>Erodium botrys</i>		2.5						0.36
Rattail sixweeks grass	UPL	0	0	0	<i>Festuca myuros</i>								0.00
Yellow sneezeweed	FACU	0	0	0	<i>Helenium amarum</i>								0.00
summer mustard	UPL	0	0	0	<i>Hirschfeldia incana</i>								0.00
Foxtail barley	FACU	0	0	0	<i>Hordeum murinum</i>								0.000
mallow	UPL	0	0	0	<i>Malva</i> sp								0.00
pineapple weed	FACU	0	0	0	<i>Matricaria matricarioides</i>								0.00
Bur clover	FACU	0	0	0	<i>Medicago polymorpha</i>								0.00
white sweet-clover	FACU+	0	0	0	<i>Melilotus alba</i>								0.00
Wild radish	UPL	0	0	0	<i>Raphanus sativus</i>								0.00
common groundsel	NI	0	0	0	<i>Senecio vulgaris</i>								0.00
common sow-thistle	NI	0	0	0	<i>Sonchus oleraceus</i>								0.00
<div><div></div><div>mid-points</div><div>5=75-100% 4=50-75% 3=25-50% 2=5-25% 1=many-5% d=few r=one</div><div>5==87.5 4==62.5 3==37.5 2==15 1==2.5 d==0.1 r==0.01</div></div>					(Sp. Rich.) Number of species:	6	12	4	9	9	6	4	7.14
					Number of native species:	2	4	3	4	4	4	2	3.29
					Total veg cover	130.1	195.1	92.6	180.3	122.8	122.6	132.5	139.43
					relative veg cover (=100-unveg):	100.0	85.0	100.0	100.0	100.0	100.0	99.9	97.8
					Σ cover of all hydrophytic spp:	115.0	170.1	92.6	137.7	70.1	120.1	117.5	117.6
					Σ cover of all native spp:	75.0	132.5	90.1	137.6	70.1	120.00	102.5	104.0
					Σ cover of all perennial spp:	112.5	130.1	92.6	140.1	70.0	120.1	102.5	109.7
					relative cover of hydrophytes:	88%	87%	100%	76%	57%	98%	89%	85%
					relative cover of natives:	58%	68%	97%	76%	57%	98%	77%	76%
					relative cover of perennials:	86%	67%	100%	78%	57%	98%	77%	80%

		Hydrophyte			Plot: Unveg:	Shin Kee Riparian Upland							
Common Name	ROIND		Native	Per		1	5	9	16	21	28	35	Ave.
yerba mansa	OBL	1	1	1					15				2.14
slender aster	FACW	1	1	1									0.00
Santa Barbara sedge	FACW	1	1	1									0.00
clustered field sedge	FACW-	1	1	1									0.00
brown dogwood	FACW	1	1	1									0.00
tall flat-sedge	FACW	1	1	1									0.00
Sedge sp.	FACW	1	1	1									
salt grass	FACW	1	1	1									0.00
spikeweed	OBL	1	1	1									0.00
common waterweed	OBL	1	1	1									0.00
hairy willowherb	FACW	1	1	1									0.00
seaside heliotrope	OBL	1	1	1									0.00
water penny	OBL	1	1	1									0.00
Baltic rush	OBL	1	1	1									0.00
soft rush	OBL	1	1	1					2.5				0.36
iris-leaved rush	OBL	1	1	1									0.00
creeping wildrye	FAC+	1	1	1		87.5	87.5	87.5	37.5	87.5	87.5	87.5	80.36
water primrose	OBL	1	1	1									0.00
swamp smartweed	OBL	1	1	1									0.00
Fremont cottonwood	FACW	1	1	1					0.1				0.01
California rose	FAC+	1	1	1									0.00
gray willow	OBL	1	1	1									0.00
Gooding willow	OBL	1	1	1									0.00
red willow	FACW+	1	1	1									0.00
arroyo willow	FACW	1	1	1									0.00
tule	OBL	1	1	1									0.00
three square	OBL	1	1	1									0.00
salt marsh bullrush	OBL	1	1	1									0.00
southern cattail	OBL	1	1	1									0.00
broad-leaved cattail	OBL	1	1	1									0.00
stinging nettle	FACW	1	1	1									0.00
fat hen	FACW	1	1	0									0.00
horseweed	FAC	1	1	0									0.00
toad rush	FACW+	1	1	0									0.00
broad-leaved pepperweed	FACW	1	0	1									0.00
bird's-foot trefoil	FAC	1	0	1			2.5						0.36
dallisgrass	FAC	1	0	1									0.00
Vasey grass	OBL	1	0	1									0.00
Kentucky bluegrass	FAC	1	0	1									0.00
dooryard knotweed	FAC	1	0	1									0.00
water beard grass	FACW	1	0	1									0.00
green dock	FACW	1	0	1									0.00
curly dock	FACW-	1	0	1									0.00
Fiddleleaf dock	FAC	1	0	1									
Himalaya blackberry	FACW	1	0	1									0.00
Pacific bent grass	FACW*	1	0	0									0.00
Slender centaury	FACW	1	0	0									
lamb's quarters	FAC	1	0	0									0.00
poison hemlock	FACW	1	0	0									0.00
water hyacinth	OBL	1	0	0									0.00
weedy cudweed	FACW-	1	0	0									0.00
Seaside barley	FAC	1	0	0									0.00
prickly lettuce	FAC	1	0	0									0.00
bearded sprangletop	OBL	1	0	0									0.00
Italian ryegrass	FAC	1	0	0									0.00
hyssop loosestrife	FACW	1	0	0									0.00
India sweet-clover	FAC	1	0	0			15						2.14
bristly ox-tongue	FAC	1	0	0									0.00
annual blue-grass	FACW-	1	0	0									0.00
rabbitfoot grass	FACW+	1	0	0									0.00
coyote bush	UPL	0	1	1									0.00
big leaf mistletoe	UPL	0	1	1									0.00
parched willowherb	UPL	0	1	0						2.5	0.1		0.37
Bindweed	UPL	0	0	1							0.1		0.01
Bermuda grass	FACU	0	0	1					2.5				0.36
wild oats	UPL	0	0	0					0.1				0.01
ripgut grass	UPL	0	0	0									0.00
soft chess	FACU-	0	0	0		37.5	37.5	37.5		37.5	37.5	0.1	26.80
Spanish Brome	UPL	0	0	0									0.00
Italian thistle	UPL	0	0	0				0.1			0.1		0.03
Big heron bill	FACU	0	0	0									
Rattail sixweeks grass	UPL	0	0	0									0.00
Yellow sneezeweed	FACU	0	0	0									
summer mustard	UPL	0	0	0									0.00
Foxtail barley	FACU	0	0	0									0.00
mallow	UPL	0	0	0									0.00
pineapple weed	FACU	0	0	0									0.00
Bur clover	FACU	0	0	0									0.00
white sweet-clover	FACU+	0	0	0									0.00
Wild radish	UPL	0	0	0									0.00
common groundsel	NI	0	0	0									0.00
common sow-thistle	NI	0	0	0									0.00
(Sp. Rich.) Number of species:						2.00	4.00	3.00	5.00	3.00	5.00	2.00	3.43
Number of native species:						1.00	1.00	1.00	3.00	2.00	2.00	1.00	1.57
Total veg cover						125	142.5	125.1	42.7	127.5	125.3	87.6	110.81
relative veg cover (=100-unveg):						100.0	100.0	100.0	85.0	100.0	100.0	100.0	97.86
Σ cover of all hydrophytic spp:						87.5	105.0	87.5	40.1	87.5	87.5	87.5	83.23
Σ cover of all native spp:						87.5	87.5	87.5	40.1	90.0	87.6	87.5	81.10
Σ cover of all perennial spp:						87.5	90.0	87.5	42.6	87.5	87.6	87.5	81.46
relative cover of hydrophytes:						70%	74%	70%	94%	69%	70%	100%	78%
relative cover of natives:						70%	61%	70%	94%	71%	70%	100%	77%
relative cover of perennials:						70%	63%	70%	100%	69%	70%	100%	77%